Nowbox-HD34 Set Top Box User Manual

1.Product introduction

1.1 Brief introduction

NOXBOX-HD34 is an easy-handling streaming media IPTV STB with high definition and high stability.It supports multiple video encoding formats such as MPEG-1，MPEG-2，MPEG-4，WMV9，H.264，VC－1 and etc.;supports many network transmission protocols such as RTSP，UDP，MMS;supports Darwin Server, Media Service, VLC and etc.Its applications include :

application accasions	functions achieved
family	surfing on the internet,receiving live streaming and VoD
hotel	surfing on the internet,receiving live streaming and VoD, interactive ordering ,real-time consumption checking, kara OK VoD ,hotel introduction ,dishes introduction ,service quotation ,urgent notice and etc..
market	advertisement broadcasting, information publishment

	,urgent notice ,Fire Guide and etc..
public place	advertisement broadcasting ,information publishment ,urgent notice ,safety bulletin and etc..
shool	school meeting live broadcast,courseware VoD ,urgent notice and etc..

1.2 Features

- accelerator for independent video & audio hardware decompression.
- it supports hardware decoding for these video fomats :H.264,VC-1,WMV9,DIVX,XVID ,MEPG-4/2/1 and etc..
- it supports RTP/RTCP,RTSP,UDP,TCP,Multicast/Unicast and etc..
- the user-friendly design of remote control button lets user enjoy network visual &acoustic entertainment to his heart's content by simple operation.
- it supports many kinds of resolution output
- remote control responding processing technology with zero delay makes operation more convenient and more practical.
- its system can work stably for a long time :7X24 hours non-stop working
- it supports PPPoE dial-up.
- its current state is shown as OSD.
- its remote control has remote study function ;it is convenient for user to compound common button functions of TV remote control into STB remote control so that STB remote control can operate not only TV set ,but also STB .
- it has PPPoE automatic dialing function ,that is ,it can directly connect to ADSL MODEM to link with the internet ;it can check automatically the state of internet connection ;and when the internet connection is cut off,it can itself try to redial again and again until it finally connects with the networks
- it supports DHCP and can automatically catch IP .

1.3 **Technical specifications:**

video	video decoding formats supported: MPEG-2 MP@HL(1080P),WMV9/VC-1MP@HL(1080P),H.264/AVC up to High Profile and Level 4(HiP@L4),1080P,MP4 Part2 ASP@L5, DivX/HD, XviD; video standard: PAL/NTSC; video resolution:1080P，1080I，720P，480/576P，480/576I; video size:4:3,16:9 automatic testing.

audio	audio mode:stereo ,left channel ,right channel; audio formats supported: MPEG-1 layers I,II,III(MP3) MPEG-2layer2 MPEG-2and MPEG-4 AAC Windows Media Audio(WMA,WMA Pro) AC3 pass-through via S/PDIF(coax)
front panel	LED indicators showing the status of power and network, power switch, an infrared(IR)receiver
back panel	video output ports :composite (RCA), HDMI,YUV component; audio output ports : left channel ,right channel and stereo(RCA),digital audio S/PDIF; 1 USB2.0 port; RJ-45 internet port for Wifi802.11b/g antenna 12V power input port.
system hardware equipments	CPU SMP8634 300MHz MPIS; Flash memory: 64M; RAM memory: 256M.
accessories	39-key IR remote control; composite video&stereo audio cable; power cord; ethernet cable (1.5m); user manual(electronic document).
internet protocols	PPPoE dial up; MMS protocol of WMS platform; standard RTSP,HTTP,RTP,UDP protocols;
browser	supports DHTML,HTML4.01 CSS1.0+,JavaScript 1.5, and SSL ; has port for embedding middleware; supports multiple language options.
physical specifications	package dimension(mm): 260×220×55; weight: 1.36kg; operation temperature:0°C-40°C; operation humidity:30%-90%; power output :12V,1A; power consumption:12W.
OS	Linux

1.4 Contents packed

one set-top box
one 12V/1A DC power plug
a group of video&audio cables(1.5 m)
RJ-45 ethernet cable (1.5 m)
warranty card
HD34 user manual (electronic document)

1.5 Development support from IPTV operators

Provide the example programmes introduction at SERVER end ,which is for integrating HD34 with the SERVER .For detail ,please contact the Technical Department of Guangzhou Webviews Digital Technology Co., Ltd..

2.Hardware equipments installation and IR remote control introduction

2.1.Hardware cables installation

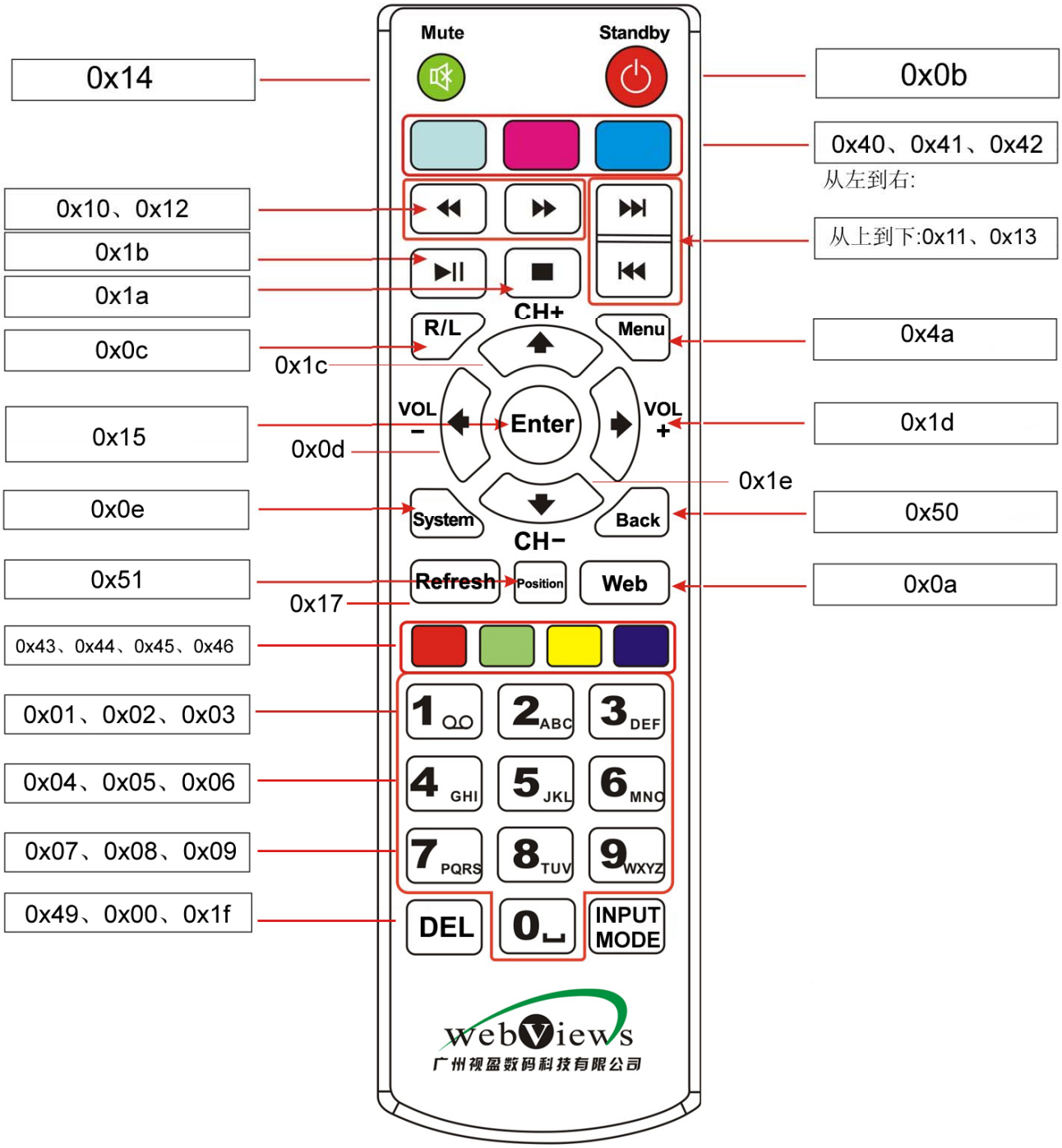
All port functions are as follows (illustrating from right to left in above picture):

- DC 12V 1A, please insert the packed 12V DC power plug into the first port
- HDMI output port can directly connect with the LCD TV's HDMI input port.
- AV output port.When the system is set for AV output, insert the packed AV cables into the corresponding colorful AV input ports of TV (port color from left to right on TV :yellow,white,red)
- RJ-45 port for connecting with the packed ethernet cable;the other end of ethernet cable can connnet to ADSL MODEM ,network switch or router and so on.
- USB port for inserting USB hard disk ,U disk and etc.. When user wants to update the system firmware ,he can first download the firmware file into U disk

and then insert U disk into USB port for updating

2.2. IR remote control introduction

用户码：0xF819　　全部为16进制编码



serial number	button	button definition
1		if you press this button ,the sound disappears;if you press the button again ,sound appears again.
2		button for turning on and turning off STB .
3.		it can switch to EPG in the system setting .
5		you can enter into system setting by pressing this button.
6		you will refresh the current page by pressing this button.
7		you will get back to previous –level menu by pressing this button.
8		if you press this button ,cursor will move upward the object .
9		if you press this button ,cursor will move downward the object.
10		if you press this button ,cursor will move rightward the object and the sound volume will be turned up under program playback state.
11		if you press this button ,cursor will move leftward the object and the sound volume will be turned down under program playback state.
12		you can press this button to confirm all kinds of operations.
13		you can get back to last operation /delete the input contents.
14		play/pause button.If you press this button ,you can pause the video which is playing;if you press this button again ,video will continue to play.

15		Button for stopping
16		scroll bar will directly come back to the very beginning of program to play ,if you press this button .
17		jump backward
18		jump forward
19		scroll bar will directly jump to the end of program,if you press this button.
20		number mode:1…. Letter mode:/@....and etc.
21		number 2,letter a b c
22		number :3 letter :d e f
23		number :4 letter :ghi
24		number :5 letter : j k l
25		number :6 letter :m n o
26		number :7 letter : p q r s
27		number :8 letter : t u v
28		number :9 letter : w x y z
29		number :0 letter : space
30		switching among left channel,right channel,stereo and mono channel .
31		if you press this button ,website input page will pop out.
32		you will enter EPG page by pressing this button.

3. Set top box setting

3.1. User login

When user uses HD34 STB for the first time ,the following window will pop out after STB is turned on.

This page is EPG play list based on webpage form. The HD34 operation form is to use the webpage with specific standard ;you can define the button functions of remote cotrol by yourself ;the player itself depends on the achievement of webpage code ,so not all JAVA-based webpages can be used.For detail ,please refer to the example page provided by us.

Concrete EPG address can be set in system setting .

when testing ,you need to confirm the following two points:

1.you already have streaming media system which you will definitely use:in this way ,what we need to do is to integrate our STB with this streaming media

system .Your technical testing colleague can provide us with the streaming established by your own streaming media system so that we can change EPG streaming address for testing .Your technical testing colleague can also establish your own EPG system for tesing under our guidance.

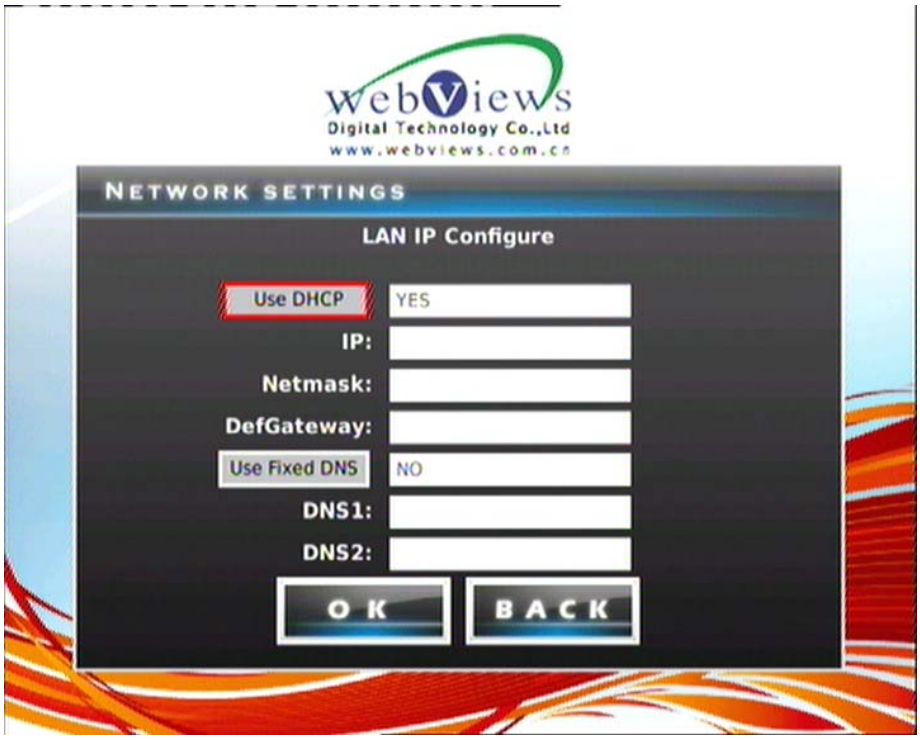
2.you have no streaming system which you will definitely use:we can provide you some server softwares which are specially for tesing or give you some advices and then help you to establish a testing environment according to the concrete situation.

If you press the System button on remote control ,the following page will appear:

The following page will display after the password "123456" is input.

3.2.Network setting

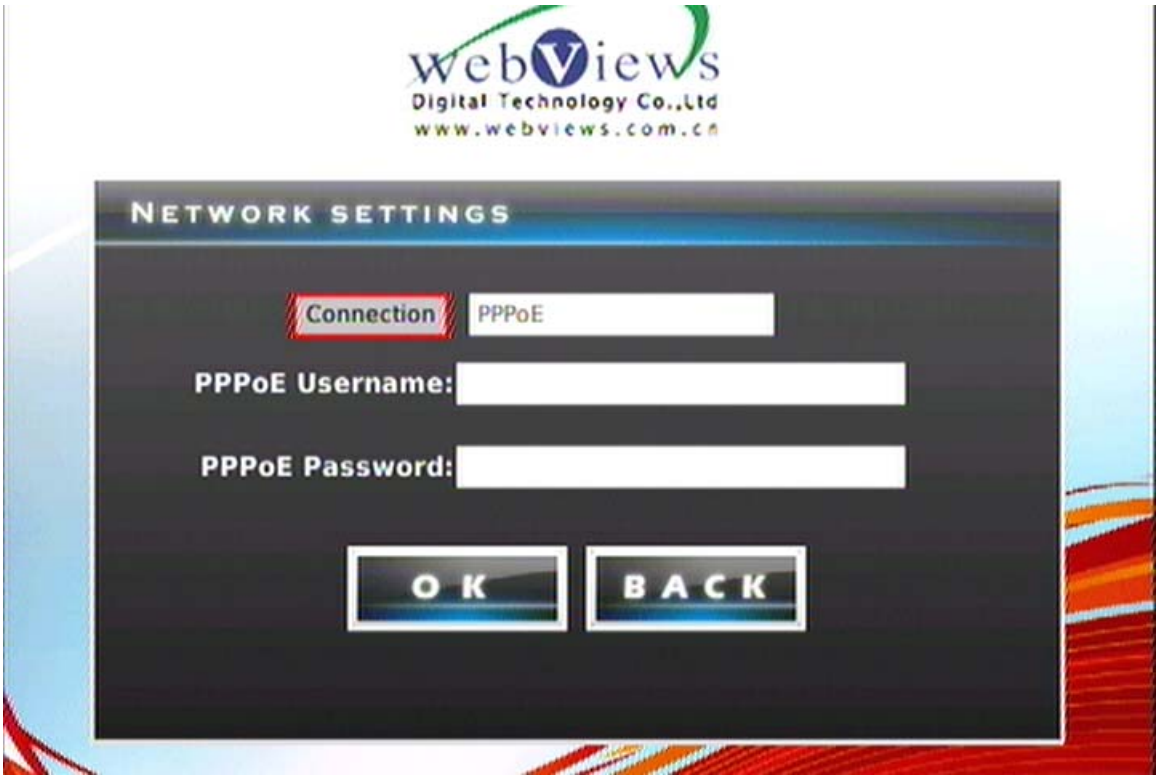
set network specifications;you can change the mode into LAN(common ethernet cable connection),WIFI (wireless connection,only HD34 with WIFI version has such connection),PPPoE(dial up mode,you need to integrate it with the wan port of demodulator for surfing on the internet)



Network mode includes static IP and dynamic IP .To connect WIFI with network ,you need to input the corresponding SSID account &password and work mode,to connect PPPoE with the network ,you need to input the account and password provided by ISP.

The following picture is WIFI setting page.When you choose WIFI/WLAN network name,press “enter” button to enter into searching page;you can begin to search the nearby wireless networks available by pressing the red button in the center of remote control.

PPPoE setting page



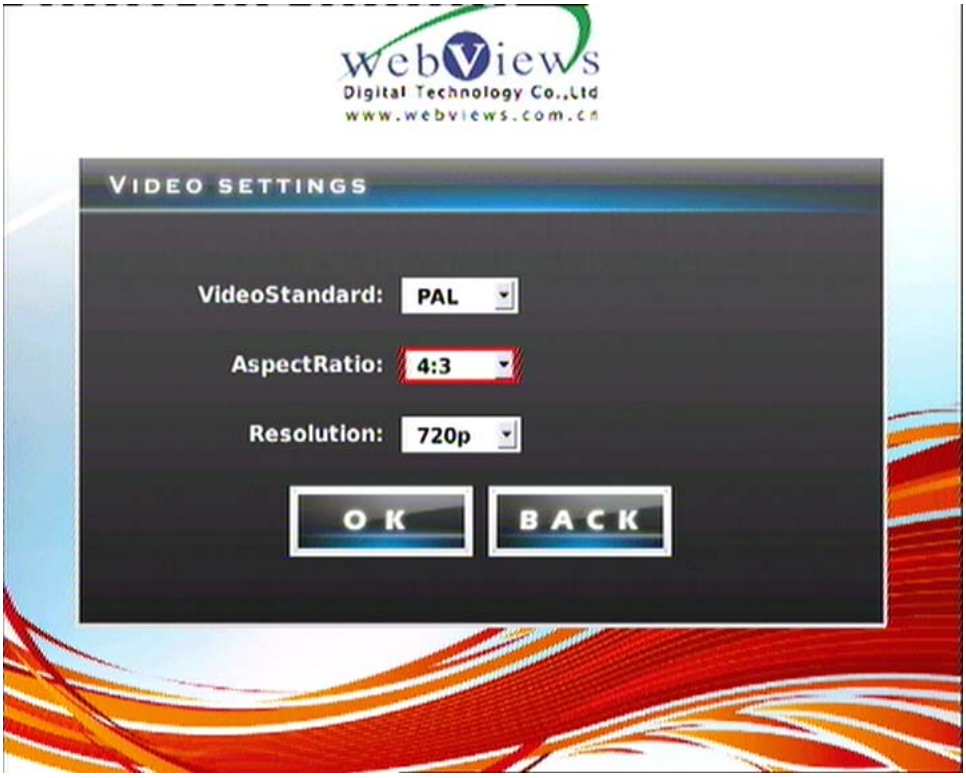
3.3.Server setting

You can change EPG address and STB network updating address.

After finishing changing EPG address and confirming with it ,you can use Menu to jump back to EPG page.After completion of changing STB network updating address ,you can choose "upgrade software" item to update software ;during the updating ,please do not cut off the electricity or reboot ;after updating is finished ,it will remind you to reboot.

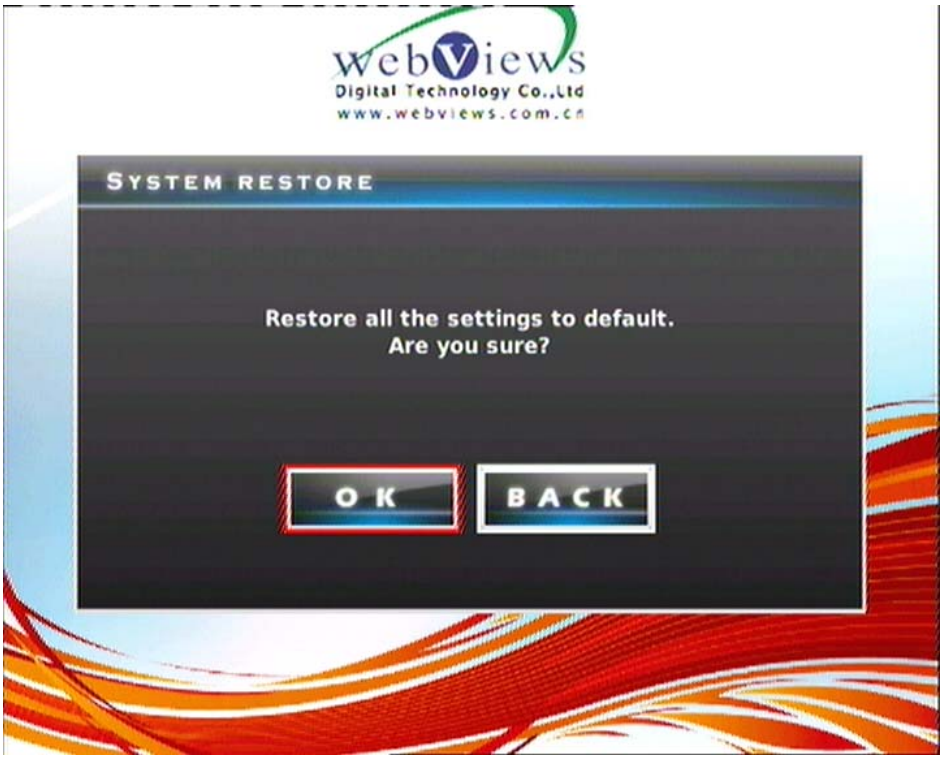
3.4. AV setting

Set input resolution,standard,aspect ratio and etc.



3.5.System restore

All configurations will be restored into default configurations.



3.6.System info

You can check the software version of STB and network state.

3.7.Password

Set the password of system setting

3.8.Clear cookie

Clear cookie

3.9.Language

Choose the language of system setting.

4.Server- end

So far the the streaming media servers HD34 can be integrated with are as follows:

MMS of Windows Media Service 2003 WMV9 streaming.

http server(such as nginx/iis）'s VOD live555 streaming by H264/MPEG-4/MPEG -2 encoding and by TS or AVI encapsulation

RTSP，UDP，HTTP of VLC TS streaming

Webviews' NowCasterPRO and NOW VOD